

Intel® Solution Services

IA-32 to Itanium™ Architecture Porting Service

Itanium™ architecture opens doors to new e-Business opportunities

The new Itanium™ architecture provides maximum headroom for the future. With massive computing resources and the ability to execute more instructions simultaneously, the Itanium platform overcomes performance limitations of traditional architectures and opens doors for new e-Business opportunities. Many leading software developers are porting, or have completed porting, their applications to the Itanium architecture, and their software will be production-ready when the first Itanium systems hit the market.

Whether the Itanium processor is already on your roadmap or you just started thinking about it, Intel® Solution Services consultants can help you understand the Itanium architecture and how it can benefit your software solutions. We can then work with your development team to choose the best porting model for your software and get you jump-started on the actual porting process. Once the porting is completed, we can even help you optimize your new Itanium-based platform software for performance through our Application Optimization Service.

You can further accelerate porting of your software solutions by taking advantage of the state-of-the-art Intel® Solution Centers. These high-tech centers are equipped with the latest Intel Architecture-based hardware and the most advanced software performance tools, all designed to ensure your software is up to the task of competing for new e-Business opportunities.

What Our Service Can Do For You

The IA-32 to Itanium Architecture Porting Service helps you:

- Learn more about features and benefits of the Itanium architecture from Intel Solution Services consultants.
- Master a well-defined porting methodology developed and improved through years of porting engagements.
- Develop a detailed porting project plan.
- Run and debug your software on Itanium processor-based hardware.
- Test your software on multiple Itanium-based platform configurations for scalability, including multiprocessing systems.

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How Our Service Works

We work with you at key steps of porting to have your software solution production-ready for the Itanium architecture. These steps include:

- **Migration Study Visit:** Our engineering consultants work with you to determine the best porting model for your software and identify hardware and software requirements for the project. We then prepare you to develop a detailed porting project plan, assist you in conducting a portability assessment, and help identify possible third-party dependencies.
- **Itanium Processor Execution and Debug Visit:** Our engineering consultants assist you in overcoming any issues you may encounter during the porting project, such as in-line assembly, pointer issues, thunking code, and building function-call wrappers. State-of-the-art Intel Solution Centers offer easy access to the latest Itanium processor-based servers that can be used to test and thoroughly debug your new Itanium architecture software. Extensive debugging helps identify and resolve any potential problems early and ensures your software is ready for Itanium servers and workstations.
- **Performance Optimization on Itanium Architecture:** Once you've completed porting your software to the Itanium architecture, our engineering consultants also can help you optimize the performance of your new software through the Application Optimization Service.

Itanium™ Architecture Porting Process Roadmap

Steps for porting an application from Pentium® Processors to Itanium™ Processors

1 Plan Porting Project

- Identify possible 3rd party dependencies
 - Understand application build, execution, test environments
- ✓ Porting Service Migration Study Visit

2 Modify Code for Common Source Base

- Address Itanium™ processor porting issues
- Use scalable data types

3 Compile, Test, Debug on Pentium® Processor Architecture

- Compile, test, and debug modified code using Pentium production operating systems and platforms

4 Compile, Test, Debug on Itanium™ Architecture

- Compile, test, and debug using pre-production SDK, tools, and operating system
- ✓ Porting Service Execution and Debug Visit

5 Compile, Test, Debug, and Optimize with Production OS, Tools, and Hardware

In-depth Porting Report

Intel Solutions Services consultants provide you with a detailed report of key learnings from porting your software. The Porting Report includes:

- **Porting Issues and Resolutions:** This section lists porting issues that were encountered during the engagement and the issue resolution details.
- **Summary of Best Known Methods (BKMs):** Typically, several tools (e.g., compilers, scripts, utilities, etc.) are used during the porting engagement, and this section summarizes BKMs for tools that were used to port your software.
- **Recommendations:** Intel Solution Services consultants also can provide other recommendations for your software solutions. These should prove helpful for your current and future porting projects, like when you decide to port different software modules.

Proven Track Record

Our porting methodology has been developed and refined during years of porting engagements with hundreds of software developers and vendors. Our consultants have end-to-end expertise in porting a wide range of software solutions, including data warehousing, digital content creation, e-Business, Internet infrastructure, scientific analysis, and more.

Intel Solution Centers

- Simulate your environment with flexible, cutting-edge resources
- Experiment with multiple solutions and non-standard configurations under realistic conditions
- Reduce drain on your technical resources
- Work side-by-side with solution engineers to achieve your business goals
- Access our centers around the world for rapid solution development

A worldwide
network of
state-of-the-
art facilities

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